

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in this application.

Listing of Claims:

Claim 1 (Currently Amended): ~~[[Bone]]~~ A bone screw ~~[[(1) with]]~~ having a longitudinal axis ~~[[(2)]]~~ comprising:

~~[[and]]~~ a threaded shaft ~~[[(15),]]~~ which ~~comprises~~ includes a threaded section ~~[[(3)]]~~ with an external diameter D_A , a ~~[[front]]~~ frontal thread end ~~[[(4)]]~~ of the threaded section, and a thread ~~profiler (11) profile~~,

wherein the thread profile ~~(11) having~~ has a front threaded flank ~~[[(7),]]~~ directed towards the ~~[[front]]~~ frontal thread end (4) of the threaded section, a rear threaded flank ~~[[(18)]]~~ and a flank angle β , ~~characterized in that~~

~~[[A)]]~~ wherein the threaded section ~~[[(3)]]~~ has a multiple thread, and ~~[[B)]]~~ each thread of the threaded section ~~[[(3)]]~~ at the ~~[[front]]~~ frontal thread end ~~[[(4)]]~~ of the threaded section has a knife-like element ~~[[(5)]]~~ with a cutting edge ~~[[(6)]]~~.

Claim 2 (Currently Amended): ~~[[The]]~~ A bone screw ~~[[(1) of]]~~ according to claim 1, ~~characterized in that~~ wherein the threaded section ~~[[(3)]]~~ has a double thread.

Claim 3 (Currently Amended): ~~[[The]]~~ A bone screw ~~(1) of claims 1 or 2,~~ ~~characterized in at~~ according to claim 1, wherein the cutting edge ~~[[(6)]]~~ encloses a sector angle α of at least 45° and preferably of at least 55° of a ~~threaded~~ thread.

Claim 4 (Currently Amended): ~~[[The]]~~ A bone screw ~~(1) of one of the claims 1 to 3,~~ ~~characterized in that~~ according to claim 1, wherein the cutting edge ~~[[(6)]]~~ is curved convexly.

Claim 5 (Currently Amended): ~~[[The]]~~ A bone screw ~~(1) of one of the claims 1 to 4,~~ ~~characterized in that~~ according to claim 3, wherein the sector angle α is between 45° and 200° of a thread.

Claim 6 (Currently Amended): ~~[[The]]~~ A bone screw ~~(1) of claim 5, characterized in~~

that according to claim 5, wherein the sector angle α is between 55° and 200° of a thread.

Claim 7 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 6,~~
~~characterized in that~~ according to claim 1, wherein the knife-like element ~~[[5]]~~ encloses an angle β of between 10° and 60° with the rear threaded flank ~~[[18]]~~.

Claim 8 (Currently Amended): ~~[[The]] A bone screw [(1) of]~~ according to claim 7,
~~characterized in that wherein~~ the knife-like element ~~[[5]]~~ encloses an angle β of between 15° and 35° with the rear threaded flank ~~[[18]]~~.

Claim 9 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 8,~~
~~characterized in that~~ according to claim 1, wherein the cutting edge ~~[[6]]~~ between the core ~~[[10]]~~ and ~~[[the]] a tip [(19)]~~ of the thread is constructed helically.

Claim 10 (Currently Amended): ~~[[The]] A bone screw of one of the claims 1 to 9,~~
~~characterized in that~~ according to claim 1, wherein the knife-like element ~~[[5]]~~ has a cutting angle γ' of between 20° and 60° at least at ~~[[the]] a tip [(19)]~~ of the threaded section.

Claim 11 (Currently Amended): ~~[[The]] A bone screw [(1) of]~~ according to claim 10,
~~characterized in that wherein~~ the knife-like element ~~[[5]]~~ has a cutting angle γ' of between 35° and 50° at least at the tip ~~[[19]]~~ of the threaded section.

Claim 12 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 11,~~
~~characterized in that~~ according to claim 1, wherein the knife-like element ~~[[5]]~~ has a constant cutting angle γ .

Claim 13 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 12,~~
~~characterized in at~~ according to claim 1, wherein the front end ~~[[4]]~~ of the threaded section coincides with the ~~[[front]]~~ frontal thread end ~~[[8]]~~ of the bone screw ~~[(1)]~~.

Claim 14 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 13,~~
~~characterized in that it has~~ according to claim 13, wherein the front end is ~~[[a]]~~ convex front end ~~(8)~~.

Claim 15 (Currently Amended): ~~[[The]] A bone screw (1) of one of the claims 1 to 14,~~
~~characterized in that~~ according to claim 13, wherein the front end ~~[[8]]~~ of the bone screw ~~[(1)]~~ comprises a facet ~~[[24]]~~, which encloses an angle ϕ of between 30° and 90°

with the longitudinal axis [(2)].

Claim 16 (Currently Amended): [[The]] A bone screw ~~(1) of one of the claims 1 to 15, characterized in that~~ according to claim 13, wherein the knife-like element [(5)], viewed from the front end [(8)] of the bone screw [(1)], is constructed sickle-shaped with a cutting edge [(6)] disposed on the outer edge.

Claim 17 (Currently Amended): [[The]] A bone screw ~~(1) of one of the claims 1 to 16, characterized in that~~ according to claim 1, wherein the threaded section [(3)] comprises at least two thread ridges [(25)], which have a flank angle δ at the core [(10)] of the threaded section and a flank angle δ' at the periphery of the thread.

Claim 18 (Currently Amended): [[The]] A bone screw [(1) of]] according to claim 17, characterized in that wherein the flank angle δ at the core [(10)] of the threaded section is larger than the flank angle δ' at the periphery of the thread.

Claim 19 (Canceled)